

IN THE CLAIMS:

Applicants respectfully request that the Claims be amended so as to read as follows:

1. Canceled, without prejudice.
2. Canceled, without prejudice.
3. Canceled, without prejudice.
4. Canceled, without prejudice.
5. Canceled, without prejudice.
6. Cancelled, without prejudice.
7. Canceled, without prejudice.

8. Canceled, without prejudice.

9. Canceled, without prejudice.

10. (Previously Presented) A method for cleaning fine particles from an electron emission device comprising:

an electron emitter including a lower electrode, an upper electrode made of a thin film, and a semiconductor layer formed between the lower electrode and the upper electrode, a surface of the upper electrode being exposed to an external space;

a counter electrode disposed opposite the upper electrode across the external space;

first voltage control means for selectively applying between the lower and upper electrodes (i) an electron emitting voltage having a polarity for accelerating electrons in the semiconductor layer such that the accelerated electrons are passed through the upper electrode and emitted to the external space, (ii) a predetermined voltage for charging fine particles adhered to the surface of the upper electrode, (iii) a voltage of opposite polarity to the polarity of the electron emitting voltage, or (iv) no voltage; and

second voltage control means for selectively applying at least one voltage between the upper electrode and the counter electrode having a predetermined relationship to the voltage applied between the lower and upper electrodes by the first voltage control means;

said method comprising the steps of:

applying the predetermined voltage for charging fine particles adhered to the surface of the upper electrode between the upper electrode and the lower electrode while at the same time applying a voltage having a predetermined relationship to the voltage applied between the upper electrode and the lower electrode between the upper electrode and the counter electrode for a period sufficient for the fine particles adhered to the surface of the upper electrode to assume a predetermine level of charge;

thereafter, applying a voltage for causing the charged fine particles to fly toward the counter electrode from the upper electrode between the upper electrode and the counter electrode without atmospheric discharge while at the same time applying between the upper and lower electrodes either no voltage or a voltage of opposite polarity to the polarity of the voltage then being applied between the upper electrode and the counter electrode; and

thereafter, applying between the upper electrode and the lower electrode an electron emitting voltage for accelerating electrons in the semiconductor layer such that the accelerated electrons are passed through the upper electrode and emitted to the external space while at the same time applying a voltage having a predetermined relationship to the voltage then being applied between the upper electrode and the lower electrode so as to convey the emitted electrons toward the counter electrode through the external space.

11. (Previously Presented) The method according to claim 10, wherein the semiconductor layer is a porous polysilicon semiconductor layer in which a part or all of the polysilicon is made porous.

12. (Previously Presented) The method according to claim 10, wherein the counter electrode has a semiconductive layer or an insulating layer formed on a surface thereof facing the upper electrode.
13. (Previously Presented) The method according to claim 10, wherein the second voltage control means applies a pulsed voltage so that the counter electrode has a positive potential relative to the upper electrode during the period when the first control means applies either no voltage or a voltage of a polarity opposite to that of the voltage applied between the upper electrode and the counter electrode between the upper electrode and the lower electrode.
14. (Currently Amended) The method according to claim + 10, wherein the voltages applied by the first voltage control means and by the second voltage control means are related to one another such that:
- during the application of the predetermined voltage between the upper electrode and the lower electrode so as to charge the fine particles adhered to the surface of the upper electrode by the first voltage control means, the second voltage control means applies a voltage having a first value; and thereafter, the second voltage control means applies a voltage having a second value higher than the first value between the upper electrode and the counter electrode.
15. (Currently Amended) The method according to claim + 10, wherein the second voltage control means applies a
- voltage between the upper electrode and the counter electrode when the electrons are not emitted from the electron emitter such that the surface of the upper electrode of the electron emitter is negative.

16. (Previously Presented) The method according to any one of claims 10-15, for use in a laser printer or a digital copying machine that includes an electron emission device.

17. (Previously Presented) The method according to any one of Claims 10-15,
wherein the fine particles include dust such as toner and paper particles.